SYSTEM AND METHOD FOR ASYNCHRONOUS DATA REPLICATION WITHOUT PERSISTENCE FOR DISTRIBUTED COMPUTING

ABSTRACT

5

A system and method of lightweight asynchronous data replication that avoids the need for any persistent store at the replication source or communication channel, and is independent of the underlying data formats, wherein the method of data replication comprises replicating deltas from a source, embedding replication tracking information in the replicated deltas, wherein the

10   tracking information comprises a timestamp and a sequence number, and applying deltas at a target. The tracking information is used to ensure that each delta is applied exactly once. In the event of a crash in the system, the target analyzes the tracking information to determine which deltas have been applied, and requests retransmission of replicated data from the source starting from the earliest unapplied delta. The source and target are treated as only delta producers and

15   consumers, and as such the invention is applicable to replication between arbitrary data source formats.